

Curriculum Vitae

Yuancheng Xu

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EDUCATION

Southern University of Science and Technology, China

2016-Present

Major in Mathematics and Applied Mathematics

GPA 3.94/4.00 (ranking: 1/94)

New York University

Spring, 2019

Visiting Student at the Courant Institute of Mathematical Sciences

GPA 4.00/4.00 (including two PhD-level courses)

RESEARCH EXPERIENCE

Prof. Christina Ramirez's Group (Statistics and Machine Learning)

July, 2019 – Present

UCLA-CSST Program

UCLA, Biostatistics Department

- Independently designing a tree-based algorithm (FREEtree) for longitudinal data with correlated features. The algorithm first selects features and then gives predictions using linear mixed effect model based recursive partitioning.
- Simulation of FREEtree on datasets that includes auto-regressive structure and treatment-time interaction. FREEtree greatly outperforms other tree-based methods for longitudinal setting such as RE-EM tree.
- Adapting Weighted correlation network analysis (WGCNA) to longitudinal dataset by using distance measure of time series such as dynamic time warping (DTW)

Prof. Sukbin Lim's Lab (Computational Neuroscience)

June – Sep, 2018

Undergraduate Research program

NYU Shanghai, Neuroscience Department

- Using the theory of differential equations to derive conditions for persistent activity in both parametric and spatial neural networks.
- Simulation of negative derivative feedback control model that attains persistent firing rate in the absence of stimulus using high-performance computing resources.
- Investigating spike-timing dependent plasticity (STDP) rule that can lead to persistent neural activity in parametric networks.

Prof. He Bingsheng's Group (Optimization)

Feb 2018

Seminar on image processing

SUSTech, Mathematics Department

- Learning how to develop mathematical models on graph denoising and graph restoring.
- Using optimization methods such as the alternating direction method of multipliers (ADMM) algorithm to solve the established model.

STANDARD TESTS

TOEFL Test

106

(30 R, 28 L, 23 S, 25 W)

Aug 2018

GRE General Test	336+4.0 (166 V, 170 Q, 4.0 AW)	Sep 2017
CET-6	642	Dec 2017

SELECTED AWARDS

Outstanding Undergraduate Scholarship (First Prize, 5%)	2017, 2018
Outstanding Freshmen Scholarship	2016
National Mathematical Olympiad (National Second Prize)	2015

COMPUTATIONAL SKILLS

Python, MATLAB, R, JAVA, C, LaTeX, HTML.